

WHAT IS CLAIMED IS:

1. Npt2B present in other than its natural environment.
2. The Npt2B according to Claim 1, wherein said Npt2B has an amino acid  
5 sequence substantially identical to the sequence of SEQ ID NO:01.
3. A fragment of the Npt2B according to Claim 1.
4. A nucleic acid present in other than its natural environment, wherein said nucleic  
10 acid has a nucleotide sequence encoding Npt2B.
5. A nucleic acid according to Claim 4, wherein said nucleic acid has a nucleic acid  
sequence that is substantially identical to the nucleotide sequence of SEQ ID NO:02.
- 15 6. A fragment of the nucleic acid according to Claim 4.
7. An isolated nucleic acid or mimetic thereof that hybridizes under stringent  
conditions to the nucleic acid according to Claim 4 or its complementary sequence.
- 20 8. An expression cassette comprising a transcriptional initiation region functional in  
an expression host, a nucleic acid having a nucleotide sequence found in the nucleic acid  
~~according to Claim 4 under the transcriptional regulation of said transcriptional~~  
initiation region, and a transcriptional termination region functional in said expression  
host.
- 25 9. A cell comprising an expression cassette according to Claim 8 as part of an  
extrachromosomal element or integrated into the genome of a host cell as a result of  
introduction of said expression cassette into said host cell.
- 30 10. The cellular progeny of the host cell according to Claim 9.

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11. A method of producing Npt2B, said method comprising:  
growing a cell according to Claim 9, whereby said Npt2B is expressed; and  
isolating said Npt2B substantially free of other proteins.
12. A monoclonal antibody binding specifically to Npt2B.
13. The antibody according to Claim 12, wherein said antibody inhibits Npt2B activity.
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14. The monoclonal antibody according to Claim 13, wherein said antibody is a humanized antibody.
15. A method for modulating Npt2B in a host, said method comprising:  
15 administering an effective amount of a Npt2B modulatory agent to said host.
16. The method according to Claim 15, wherein said modulatory agent is a small molecule.
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17. The method according to Claim 15, wherein said modulatory agent is an antibody.
18. A method of screening to identify Npt2B modulatory agents, said method comprising:  
25 contacting a cell expressing functional Npt2B on its surface with a candidate agent in the presence of phosphorous anion; and  
determining the amount of phosphorous anion uptake by said cell.
19. The method according to Claim 18, wherein said phosphorous anion is labeled  
30 with a detectable label.

20. The method according to claim 19, wherein said label is isotopic.

21. A method of treating a host suffering from a disease condition associated with  
5 Npt2B activity, said method comprising:  
administering to said host a Npt2B modulatory agent.

22. The method according to Claim 21, wherein said Npt2B modulatory agent is an  
Npt2B agonist.

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23. The method according to Claim 21, wherein said Npt2B modulatory agent is an  
Npt2B antagonist.

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24. The method according to Claim 23, wherein said disease condition is characterized  
by the presence of hyperphosphatemia.

25. A non-human transgenic animal model capable of expressing Npt2B.